

JAPAN

EDICT OF GOVERNMENT

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JIS B 6507 (1981) (English): General code of safety for wood working machinery

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*The citizens of a nation must
honor the laws of the land.*

Fukuzawa Yukichi

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JAPANESE INDUSTRIAL STANDARD

General Code of Safety
for Woodworking Machinery

JIS B 6507 —1981

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standard in Japanese is to be evidence

JAPANESE INDUSTRIAL STANDARD

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General Code of Safety
for Woodworking Machinery

B 6507-1981

1. Scope

This Japanese Industrial Standard specifies the general matters relating to the safety measures for woodworking machinery, their accessories, and auxiliary machinery.

2. Definitions

For the purpose of this standard, the principal terms are as defined below:

- (1) main spindle A shaft that holds and rotates a cutting tool or workpiece.
- (2) main spindle lock A device used to temporarily locking the main spindle against rotation.
- (3) tool retainer A device that prevents the cutting tool from falling off the main spindle or holder (e.g. cutter head, holder, etc.) while its setting adjustment is under way.
- (4) workpiece holder A device that keeps the workpiece in position under transfer and working.
- (5) carriage A component part or accessory of the machine that transfers the workpiece to the working position.
- (6) presser A device that ensures the transfer of the workpiece on the carriage by pressing the workpiece.
- (7) safety device A device that controls the occurrence of a phenomenon that may cause a disaster, or an equipment that protects human bodies from such a phenomenon.
- (8) locking device A device that fixes things in a certain combined condition.
- (9) push-back The phenomenon that the workpiece is violently pushed back nearly reversely to the direction of feed or knocked off by the revolving cutting tool, etc.
- (10) spring-back The phenomenon that fragments of wood, etc. are sprung back toward the inlet of the workpiece by the revolving cutting tool, etc.
- (11) repulsion The generic term of push-back and spring-back.

- (12) overrun The phenomenon that the workpiece is violently pushed ahead or sprung off in its direction of feed by the revolving cutting tool, etc.
- (13) scattering The phenomenon that flakes, chips, fragments of wood, etc. are scattered in indefinite directions by the revolving cutting tool, etc.

3. Safety Construction

3.1 Moving Parts The machine and equipment shall be so constructed that power-driven moving parts, such as the driving gear, transmission gear, carriage, rolls and compression table, do not expose outside. If it is difficult for a machine or equipment to be constructed so and there is a possibility of the worker's getting close to it, it shall be provided with covers or, if it is difficult, equipped with guards having a function of touch prevention.

3.2 Hot Parts Hot parts of heating devices, such as the compression hot plate, hot-glue pot, etc., to which the worker can get close shall be provided with covers or, if it is difficult, equipped with guards having a function of touch prevention.

3.3 Matters Relating to Tools The tools to be used in working shall comply with the following requirements:

- (1) A cutting tool shall be of a construction that other than the part essential to cutting does not protrude outside the machine. If the tool is hard to have such construction, it shall be provided with a cover or a device having a function of touch prevention.
- (2) It shall be so constructed that its fitting, replacement, adjustment, etc. can be properly and surely done with simple procedures, and, when a danger due to the rotation, drop, etc. of the tool is likely to occur, a main spindle lock, tool retainer, etc. shall be built in.

3.4 Matters Relating to Workpiece The workpiece, and its mounting and transfer shall comply with the following requirements:

- (1) It is recommended that a device to reject the workpiece which exceeds the specified limits to dimensions, shape, mass, etc. be provided.
- (2) The workpiece holder shall be of strong construction and shall not likely to touch the cutting tool.
- (3) Workpiece feeding shall, as a rule, be done automatically and be made sure by the aid of the presser. A machine with manual feeding system shall be so constructed that an automatic workpiece carriage can be used as an auxiliary equipment.

- (4) The workpiece carriage shall be so constructed that it will not sustain the movement and flow of the workpiece, irrespective of the workpiece's irregularity in form or inhomogeneity.

3.5 Driving Power Source The driving power source shall be so constructed that it can be locked in open position while the machine and equipment are being cleaned, checked, adjusted, or the tools are being replaced, and shall be equipped with a device which can indicate that such operations are under way.

3.6 Starting Switch The starting switch shall, as a rule, be of such operation system that the open position can be maintained automatically when the power is cut off or the driving power switch is turned off, and it can be continued irrespective of the recovery of power line.

3.7 Return Stop The machine shall be so constructed that, in the case of power shut-off, the movable parts, such as the main spindle, workpiece carriage, workpiece clamp, etc., stop instantaneously or return automatically to a stable position and stop.

3.8 Operation Control Panel The operation control panel shall be as specified below:

- (1) The operation control panel shall be located in a safe position, and, particularly in highly dangerous woodworking machine, it shall be constructed so as to be operable only by the designated worker, with the exception of the operation of the emergency stop gear.
- (2) The dimensions, shape, construction, location and colouring of various operation handles, switches, etc. shall be designed carefully, and a necessary locking-up gear shall be built in.
- (3) It is advisable to build in a locking-up gear to lock the operation of the machine and equipment unless the safety equipment is normally attached.
- (4) It is advisable to build in a locking-up gear to lock the operation of the machine and equipment unless the correct operation procedure is followed.

3.9 Main Spindle Brake The machine and equipment that may be dangerous due to the inertial revolution of the main spindle after cutting off the power shall be equipped with a brake.

3.10 Scrap Handling Equipment, Scrap Conveyor, etc. The scrap handling equipment, scrap conveyor, dust collector, etc. shall be so constructed that they operate surely and that chips, wood fragments, etc. will not clog in any part of the machine and equipment.

3.11 Prevention of Noise and Vibration The construction and mechanism of the machine shall be such that the occurrence of noise and vibration are as little as possible and that these are confined within the machine as far as practicable.

3.12 Explosion-Proofing The machine and equipment to be used in the environment where a risk of explosion and fire from the spark of motors or switches exists shall be equipped with explosion-proof device.

3.13 Skidproof Tread The working platform, ladder, etc. fitted to the machine and equipment shall be provided with skidproof treads, handrails, guards, etc.

3.14 Lighting The lighting equipment of the machine and equipment, if fitted, shall use a light source under which moving parts do not look flickering or stopping, or the workpiece does not look in a different colour from the normal.

3.15 Maintenance, Checking, etc. The machine and equipment shall be so constructed that their maintenance, checking, adjustment, cleaning, etc. may be carried out surely by simple procedure.

In addition, it is recommended that the equipment of an automatic lubricating device, centralized lubricating device or the like is equipped.

4. Safety Device

4.1 Prevention of Overrun A woodworking machine, its part, or workpiece having big inertia shall be provided with an overrun preventing device, buffer, brake, etc.

4.2 Touch Prevention The equipment and covering having the function of preventing touch specified in 3.1, 3.2 and (1) of 3.3 shall be suitable for work, highly durable, and strong.

4.3 Repulsion Prevention A woodworking machine in which push-back, overrun, spring-back, or scattering is likely to occur shall be attached with a repulsion preventing device, scatter preventing device, etc.

4.4 Emergency Stop A woodworking machine in which a danger due to roll-in, squeeze, etc. is feared shall be provided with an emergency stopper, which shall, in addition, have the function of turning back, opening, etc. as necessary.

4.5 Alarm, Automatic Stop, etc. A woodworking machine of particularly high danger shall be equipped with an alarm or automatic stop for any trouble in the machine proper, safety device, etc. or for the access of human body to the dangerous zone, etc.

5. Instruction to Users

The woodworking machinery and auxiliary equipment shall carry the instructions to users containing the necessary matters for ensuring safety, such as the model, specifications, construction, tools, operation, maintenance, checking, adjustment, installation and other precaution for safety.

6. Inspection Label

The woodworking machinery and accessories shall be accompanied by the inspection label about safety (inspection items and results of inspection).

7. Marking

The woodworking machinery, accessories, etc. shall bear the marking of the following items marked indelibly at a conspicuous place:

- (1) Manufacturer's name
- (2) Year and month of manufacture and serial number
- (3) Model
- (4) Types and ranges (e.g., width, length, thickness, diameter) of applicable tools
- (5) Other important matters, particularly in relating to safety

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